

IN THE CLAIM

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-2 (canceled)

Claim 3 (currently amended): A crystal unit ~~according to claim 2~~, comprising:

a crystal blank for a vibrator;

a reinforcing plate comprising a quartz crystal plate or a glass plate and having a through-hole;

a pair of excitation electrodes, one excitation electrode being formed on one of two major surfaces of said crystal blank, and the other excitation electrode being formed on the other major surface of said crystal blank, said excitation electrodes corresponding to location of said through-hole; and

a plurality of extending electrodes that extend away from respective excitation electrodes,

wherein said crystal blank and said reinforcing plate are joined at an entire peripheral portion of said crystal blank by direct bonding, and an Si-O-Si chemical bond is formed between said crystal blank and said reinforcing plate as said direct bonding.

Claim 4 (currently amended): A crystal unit ~~according to claim 2~~, comprising:

a crystal blank for a vibrator;

a reinforcing plate comprising a quartz crystal plate or a glass plate and having a through-hole;

a pair of excitation electrodes, one excitation electrode being formed on one of two major surfaces of said crystal blank, and the other excitation electrode being formed on the other major surface of said crystal blank, said excitation electrodes corresponding to location of said through-hole; and

a plurality of extending electrodes that extend away from respective excitation electrodes,

wherein said crystal blank and said reinforcing plate are joined at an entire peripheral portion of said crystal blank by direct bonding, and an Si-Si chemical bond is formed between said crystal blank and said reinforcing plate as said direct bonding.

Claim 5 (currently amended): A crystal unit according to claim [[1]] 3, wherein said crystal blank is constituted by an AT-cut quartz crystal plate, and said reinforcing plate is constituted by a Z-cut quartz crystal plate.

Claim 6 (currently amended): A crystal unit according to claim [[2]] 4, wherein said crystal blank is constituted by an AT-cut quartz crystal plate, and said reinforcing plate is constituted by a Z-cut quartz crystal plate.

Claim 7 (currently amended): A crystal unit according to claim [[2]] 3, wherein:
said crystal blank ~~is constituted~~ comprises an AT-cut quartz crystal plate;
said reinforcing plate ~~is constituted~~ comprises an AT-cut quartz crystal plate; and
one of said extending electrodes extends over, of side surfaces of said through-hole, an inclined surface that is oblique to a crystallographic Z'-axis of a quartz crystal that ~~constitutes~~ comprises said reinforcing plate.

Claim 8 (currently amended): A crystal unit according to claim [[1]] 3, wherein said crystal blank is constituted by an AT-cut quartz crystal plate, and said reinforcing plate is constituted by a glass plate.

Claim 9 (currently amended): A crystal unit according to claim [[2]] 4, wherein said crystal blank is constituted by an AT-cut quartz crystal plate, and said reinforcing plate is constituted by a glass plate.

Claim 10 (withdrawn): A method of fabricating a crystal unit, comprising steps of:
providing a through-hole corresponding to a formation location of each crystal unit in a first wafer that corresponds to a plurality of said crystal units;

directly bonding said first wafer in which said through-holes have been formed to a second wafer constituted by a quartz crystal plate to obtain a laminate;

forming excitation electrodes that are provided on both major surfaces of said second wafer corresponding to the formation location of each of said crystal units, and extending electrodes that extend away from said excitation electrodes, respectively; and
dividing said laminate into individual crystal units.

Claim 11 (withdrawn): A method of fabricating a crystal unit according to claim 10, wherein said first wafer is constituted by a Z-cut quartz crystal plate, and said second wafer is constituted by an AT-cut quartz crystal plate.

Claim 12 (withdrawn): A method of fabricating a crystal unit according to claim 10, wherein said first wafer is constituted by an AT-cut quartz crystal plate, and said second wafer is constituted by an AT-cut quartz crystal plate.

Claim 13 (withdrawn): A method of fabricating a crystal unit according to claim 12, wherein said extending electrode, which is connected to said excitation electrode that is formed on the major surface of said second wafer that is the through-hole side, is formed on an inclined plane that is oblique to the Z'-axis of the quartz crystal and that occurs in said through-hole.

Claim 14 (withdrawn): A method of fabricating a crystal unit according to claim 10, wherein said first wafer is constituted by a glass plate, and said second wafer is constituted by an AT-cut quartz crystal plate.

Claim 15 (withdrawn): A method of fabricating a crystal unit, comprising steps of:
directly bonding a first wafer that corresponds to a plurality of crystal units to a second wafer that is constituted by a quartz crystal plate to obtain a laminate;

forming holes that correspond to a formation location of each of said crystal units in said laminate from the major surface of said first wafer that is exposed as far as an interface of said first wafer and said second wafer;

forming excitation electrodes that are provided on both major surfaces of said second wafer that correspond to the formation location of each of said crystal units, and extending electrodes that extend away from excitation electrodes, respectively; and
dividing said laminate into individual crystal units.

Claim 16 (withdrawn): A method of fabricating a crystal unit according to claim 15, wherein said first wafer is constituted by a Z-cut quartz crystal plate, and said second wafer is constituted by an AT-cut quartz crystal plate.

Claim 17 (withdrawn): A method of fabricating a crystal unit according to claim 15, wherein said first wafer is constituted by an AT-cut quartz crystal plate, and said second wafer is constituted by an AT-cut quartz crystal plate.

Claim 18 (withdrawn): A method of fabricating a crystal unit according to claim 17, wherein an extending electrode that is connected to said excitation electrode that is formed on the major surface of said second wafer that is the through-hole side are formed on an inclined surface that is oblique to Z'-axis of a quartz crystal and that occurs in said through-hole.

Claim 19 (withdrawn): A method of fabricating a crystal unit according to claim 15, wherein said first wafer is constituted by a glass plate, and said second wafer is constituted by an AT-cut quartz crystal plate.

Claim 20 (new): A crystal unit according to claim 4, wherein:
said crystal blank comprises an AT-cut quartz crystal plate;
said reinforcing plate comprises an AT-cut quartz crystal plate; and
one of said extending electrodes extends over, of side surfaces of said through-hole, an inclined surface that is oblique to a crystallographic Z'-axis of a quartz crystal that comprises said reinforcing plate.